WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

an insulating film which is provided in at least one layer above a substrate and whose relative dielectric constant is 3.4 or less;

at least one conductive layer provided in the insulating film;

at least one conductive plug which is formed in the insulating film and which is electrically connected to the conductive layer to form a conduction path;

at least one reinforcing material which is provided under at least the conductive layer and whose Young's modulus is 30 GPa or more; and

at least one first reinforcing plug which is connected to the conductive layer and which is formed in contact with the reinforcing material.

2. The device according to claim 1, wherein:

the first reinforcing plug is provided within 5 μm from the conductive plug.

3. The device according to claim 1, wherein:

an interval between plugs including the first reinforcing plug and the conductive plug is set to 5 μm or less.

4. The device according to claim 1, wherein:

a plurality of first reinforcing plugs are arranged within 5 μm from the conductive plug, and an interval between plugs including the respective

first reinforcing plugs and the conductive plug is set to 1 μm or less.

5. The device according to claim 1, wherein:

the insulating films and the reinforcing materials are stacked and arranged in two or more layers, respectively, and the conductive layers, the conductive plugs, and the first reinforcing plugs are provided with respect to the insulating films and the reinforcing materials of the respective layers.

6. The device according to claim 1, further comprising:

a reinforcing metal layer which is provided in the insulating film in an area other than that where the conductive layer is formed, and which is electrically disconnected from the conductive layer and the conductive plug; and

a second reinforcing plug which is connected to the under side of the reinforcing metal layer and which is formed in contact with the reinforcing material.

7. The device according to claim 1, further comprising:

a barrier metal film with which the conductive plug is coated and which contains a high-melting metal.

8. The device according to claim 1, wherein a Young's modulus of the insulating film of at least one layer is 20 GPa or less.

9. The device according to claim 6, wherein:

the reinforcing metal layer is provided within 5 μm from the conductive layer.

10. The device according to claim 6, wherein:

a plurality of second reinforcing plugs are provided, and an interval between the second reinforcing plugs is set to 5 μm or less.

11. The device according to claim 6, wherein:

at least one of the reinforcing materials is the reinforcing metal layer provided in the insulating film of a layer under that of the insulating film in which the conductive layer is provided.

12. The device according to claim 6, wherein:

the insulating films and the reinforcing materials are stacked and arranged in two or more layers, respectively, and the conductive layers, the conductive plugs, the first reinforcing plugs, the reinforcing metal layers, and the second reinforcing plugs are provided with respect to the insulating films and the reinforcing materials of the respective layers.

13. A semiconductor device comprising:

an insulating film which is provided above a substrate and whose relative dielectric constant is 3.4 or less;

a conductive layer provided in the insulating film;

a conductive plug which is formed in the insulating film and which is electrically connected to

the conductive layer to form a conduction path; and

at least one dummy via chain which is provided in the insulating films stacked in two or more layers above the substrate within 5 μm from a wiring layer comprised of the conductive layer and the conductive plug; wherein

the dummy via chain comprises at least two reinforcing metal layers and at least one reinforcing plug, in which

the reinforcing metal layer is electrically disconnected from the wiring layer,

at least one reinforcing metal layer is provided in each of the insulating films of at least two different layers of the respective insulating films,

the reinforcing metal layer is extended and formed to be longer than a diameter of the reinforcing plug along the surface of the insulating film,

the reinforcing metal layers are superposed upon each other in a stacking direction of the insulating films and deviate from each other along a direction vertical to the stacking direction of the insulating films,

the reinforcing plug is formed in the insulating film of at least one layer, and

the reinforcing plug connects the reinforcing metal layer to another reinforcing metal layer along the stacking direction of the insulating films.

14. The device according to claim 13, wherein:

the dummy via chain is comprised of at least two the reinforcing metal layers which are provided in a same layer each other, and are connected each other via at least two the reinforcing plugs and the reinforcing metal layer provided in a different layer from the layer in which two the reinforcing metal layers are provided.

15. The device according to claim 13, wherein:

each the reinforcing metal layer is extended and formed to be long in a same direction in each layer.

16. The device according to claim 13, wherein:

the dummy via chain is formed in a direction vertical to the stacking direction of the insulating films, with extending for two dimensions.

17. The device according to claim 13, wherein:

at least two the dummy via chains are provided with arranging along a direction vertical to the stacking direction of the insulating films.

18. The device according to claim 13, further comprising:

a barrier metal film with which the conductive plug is coated and which contains a high-melting metal.

19. The device according to claim 13, wherein;

a Young's modulus of the insulating film of at least one layer is 20 GPa or less.

20. The device according to claim 13, wherein:

the conductive layer is formed as an isolated wiring, and the dummy via chain is provided around the isolated wiring.

21. The device according to claim 13, wherein:

the reinforcing metal layer is formed in a length which is equal to or less than that of the conductive layer.

22. The device according to claim 16, wherein:

the dummy via chain has the reinforcing metal layer of which a plane pattern is formed into L-shape, quadrangular frame shape, or quadrangular shape.

23. The device according to claim 21, wherein:

the reinforcing metal layer is formed in a length of 2 μm or less.